

A NEW NEMOGNATHA FROM SOUTHERN MEXICO (MELOIDAE)

By RICHARD B. SELANDER¹

Most of the specimens described below were collected in 1955 by my wife and myself in the course of field work partially supported by grants from the Sigma Xi-RESA Research Fund and the Penrose Fund of the American Philosophical Society. Additional specimens were made available to me by Mrs. Patricia Vaurie, of the American Museum of Natural History.

Nemognatha selloa, new species

Head black, lacking a pale frontal spot. Pronotum orange with a brown or black streak on each side of disk in basal half (as in figure 4) and often with an additional one on midline; median streak when well developed tending to fuse with lateral streaks. Scutellum black. Elytra orange, sometimes with lateral margin at apex broadly piceous. Wings dark brown. Under surface of thorax and legs black. Basal abdominal sterna black; apical two or three sterna orange. Pubescence black throughout. Length: 9-11 mm.

Head strongly triangular, narrower than pronotum; width at tempora one-tenth to nearly one-fifth greater than length of head from top of vertex to base of labrum; top of vertex markedly tumid at center; tempora well defined, inflated, prominent; surface smooth, shiny, moderately coarsely, irregularly punctate; punctures sparse on vertex, rather dense on frontal area; a longitudinal impunctate area on front of head above middle of eyes; pubescence long (as long as or longer than antennal segment II), erect. Eyes moderately large, prominent, moderately deeply emarginate. Mandibles heavy. Galeae short, reaching middle of metasternum, sparsely clothed with bristle-like setae. Antennae long, three to three and one-half times as long as pronotum, tapered to apex; segments moderately compressed; III to VI subequal in length; VII to X progressively barely shorter; XI nearly one-third longer than X. Pronotum (fig. 4) transverse, one-third to two-fifths wider than long, widest before middle; basal margin very shallowly emarginate; surface smooth, shiny, moderately coarsely, irregularly punctate, with several impunctate areas; punctures sparse before middle, denser behind. Scutellum large; apex broad, squarely truncate; sides weakly arcuate. Elytra obsolescently rugose, shiny, coarsely, shallowly, regularly punctate; punctures becoming finer at apex; average distance between punctures at middle of elytra equal to or less than diameter of a single puncture; setae semi-erect, little more than half as long as those on head. Hind tibial spurs short, sticklike, flattened, deeply grooved behind; outer spur moderately thickened, noticeably heavier than inner spur, parallel-sided, not flared or expanded apically, truncate at apex; inner spur weakly tapered, bluntly rounded at apex.

Male: Fourth and fifth abdominal sterna each with a large, transversely oval, heavily tufted, punctulate impressed area at center. Sixth sternum medially cleft, impressed. Genitalia as in figures 1-3; lip of median tube of aedeagus with a pair of small, compressed, somewhat sclerotized lobes, these not articulated with body of aedeagus.

Female: Pubescence of fore tarsi not noticeably longer or denser than in male. Fourth and fifth abdominal sterna unmodified; posterior margin of fifth sternum

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fringed with fine setae at middle, above emargination of sixth sternum. Sixth sternum not impressed, deeply emarginate medially.

Type Material: Holotype male and allotype female from 9 miles southeast of Tejupan, Oaxaca, June 26, 1955, R. B. and J. M. Selander (Illinois National History Survey collection). Paratypes: *México*: San Juan Teotihuacán, July 28, 1947, B. Malkin, 1 ♂. *Oaxaca*: [Asunción] Nochixtlan, 7000 ft., July 18, 1955, P. and C. Vaurie, 2 ♂♂; Tejupan, June 26, 1955, R. B. and J. M. Selander, 1 ♀; eutopotypical, 3 ♀♀. *Puebla*: Tlacotepec [between Tehuacán and Puebla], July 2, 1955, R. B. and J. M. Selander, 1 ♀. *Tlaxcala*: 8 miles west of Calpulalpan, June 28, 1955, R. B. and J. M. Selander, 1 ♂, 3 ♀♀. Paratypes in the American Museum of Natural History and the collections of W. R. Enns and R. B. Selander.

This species is a member of the subgenus *Pauronemognatha* as defined by Enns (1956, Univ. Kansas Sci. Bull., vol. 37, pt. 2, p. 764). Its affinities are apparently South American rather than Nearctic. Among the species of the genus *Nemognatha* previously known from México and Central America it seems to be most similar to *scutellaroides* Wellman (= *nigripes* Champion), the form to which it traces in Champion's key (1892, Biol. Centrali-Americana, Coleoptera, vol. 4, pt. 2, p. 373). Judged by Champion's description, *scutellaroides* is easily distinguished from *selloa* by its flavo-testaceous head, longer galeae, densely punctate elytra, and slender hind tibial spurs, in addition to several other differences.

Specimens from Tlacotepec, Tejupan and 9 miles southeast of Tejupan, and 8 miles west of Calpulalpan were collected from flowers of *Selloa glutinosa* Sprengel (determined by F. Miranda). This plant is a yellow-flowered composite resembling in growth form a small species of *Chrysothamnus*. According to Kearney and Peebles (1951, Arizona flora, p. 851), it ranges from Texas and southern Arizona to Central America. It is fairly common along the road and on dry hillsides in the Río Balsas Valley of Puebla and south on the tableland to near Oaxaca de Juárez, Oaxaca. At Tejupan and 9 miles southeast of Tejupan and at Tlacotepec it occurs below the oak belt at elevations between 6000 and 7000 feet. To the north, on the Mexican Plateau proper, I noted seeing it only in Tlaxcala. In the Calpulalpan region of Tlaxcala it is found in open pine-juniper savannah at elevations between 8500 and 9500 feet. In 1955 the *Selloa* did not flower in southern México until after the middle of June. The beetles were found singly in the flowers and were decidedly rare.

Attached to the under side of the head of one of the female beetles from 8 miles west of Calpulalpan were four first instar larvae of a species

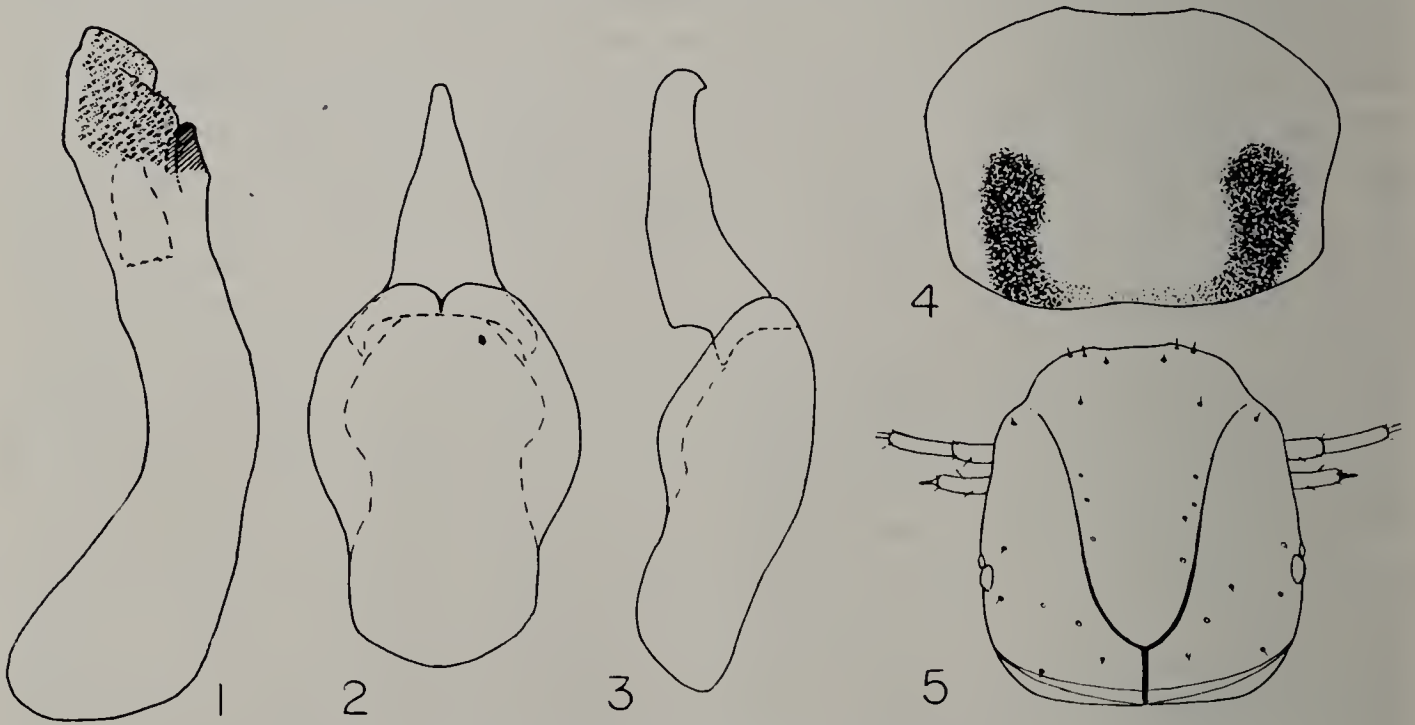
of *Nemognatha*. It is fairly safe to assume that these represent *selloa* inasmuch as there is no indication that *Selloa glutinosa* supports a species of *Nemognatha* other than *selloa*. Furthermore, the relationships suggested by the morphology of the larvae are not in conflict with those indicated by the morphology of the adult beetles. A description of the larvae follows:

Color yellow. Body surface finely, weakly reticulate; frons smooth; under surface of prothorax scalloped. Form moderately slender; length four times greatest width. Head longer than wide, 31 : 25, broadly rounded in front (fig. 5); epicranial suture well developed. Antennae three-tenths as long as head; segment II slightly less than twice as long as I, slightly shorter than III; terminal seta six times as long as its segment. Mandibles each with three transverse toothlike ridges; basal ridge incomplete. Maxillary palpi three-tenths longer than antennae; second segment one-half longer than first segment, nearly half as long as third. Thorax moderately robust, longer than greatest width, 30 : 22; mesothoracic spiracle equal in diameter with first abdominal spiracle. Abdomen gradually tapered; diameter of first spiracle about two-fifths greater than that of second; first seven terga each with a posterior marginal row of eight setae and a median transverse row of four setae; mesal four setae of posterior marginal row very short, fine, about one-eighth length of tergum; outer seta on each side of tergum longer and heavier, subequal to sternal setae except on seventh tergum where outer seta is even larger; seta on posterior margin of each paratergum as large as outer seta of tergum except on seventh segment; median length of seventh tergum greater than that of spiracle-bearing elevation of eighth segment; distance between bases of spiracle-bearing elevations about three-fourths distance from inner base to apex of one process; two setae on eighth tergum between bases of elevations; posterior sterna with longest setae about one-fourth length of sternum. Legs with setae of all trochanters shorter than corresponding femora (on longer, in fact, than trochanters themselves); tarsal claws about two-fifths as long as tibiae; tarsal setae long, slender; longest seta of first tarsus reaching a point three-fourths distance from base to apex of claw. Length: 1.2-1.3 mm.

The larva of this species agrees fully with MacSwain's (1956, Univ. California Publ. Ent., vol. 12, p. 126) diagnosis of *Nemognatha* except that the posterior marginal setae of the sterna are less than half the length of the sterna. It is most similar to the larva of *nigripennis* LeConte. *Scutellaris* LeConte, the only other species of the subgenus *Pauro-nemognatha* whose larva is known, is as distinct from *selloa* as from *nigripennis*.

It is noteworthy that the larval specimens of *scutellaris* which I have studied (Walker Mine, California) will not run to *scutellaris* in MacSwain's key to the species of *Nemognatha* because none of the setae of the third trochanters are longer than the corresponding femora. In order to overcome this difficulty and to incorporate *selloa*, the following modification of the first couplets of MacSwain's key is suggested.

1. Abdominal tergites [terga] without a median transverse row of setae; frontal sutures diverging at or near transverse basal elevation (pl. 28) **scutellaris**
 Abdominal tergites with a median transverse row of four (rarely two) setae; frontal sutures, when present, diverging at a distance from transverse basal elevation..... 2
2. Trochanters with all setae shorter than corresponding femora 2a
 Trochanters with some setae considerably longer than corresponding femora 3
- 2a. Abdominal tergites with a median transverse row of two setae and a posterior marginal row of six; epicranial suture faint, discontinuously marked **nigripennis**
 Abdominal tergites with a median transverse row of four setae and a posterior marginal row of eight; epicranial suture well developed, continuously marked. **selloa**



Nemognatha selloa, new species

FIG. 1. Aedeagus (holotype), lateral view. FIG. 2. Male gonoforceps (holotype), dorsal view. FIG. 3. Same, lateral view. FIG. 4. Pronotum (paratype, Calpulalpan, Tlaxcala). FIG. 5. Head of first instar larva, dorsal view.